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ABSTRACT

The recent increase in emphasis on the impact of early childhood experience on subsequent human development constitutes a change in the conceptual framework of the study of early childhood development. Anyone who is interested in prevention and intervention needs to be aware of the particulars of the debate on the strengths and weaknesses of the new paradigm, and to address the issues raised by the new research on infancy. This article provides a brief sampling of aspects of the debate. The article: (1) describes the role of family needs and service overload in the social context of the debate; (2) reviews recent attachment research from Bowlby through Ainsworth to Belsky; (3) discusses the Strange Situation; and (4) considers the controversy about day care that Belsky's research has engendered. Belsky's findings led him to assert that day care, and particularly full-time day care (care of more than 20 hours per week), was a risk factor. Researchers criticized Belsky's work for its dependence on the Strange Situation procedure, for its use of an insufficient number of studies as the basis for a broad generalization, and for the policy implications of the generalization. An extensive bibliography is provided. (RH)

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MAKING PREVENTION A WAY OF LIFE: THE IMPORTANCE OF INFANT DEVELOPMENT

Chet Brandt

When Jerome Bruner and Helen Haste wrote in 1987 that "a quiet revolution has taken place in developmental psychology in the last decade," (Bruner and Haste, 1987) they were half right. The revolution has been real, but the noise created by that revolution is getting louder with each passing year. To borrow the phrase from Thomas Kuhn, there has been what can only be described as a "paradigm shift" (or what he later called a change in the conceptual framework) in the study of early childhood development (Kuhn, 1962). This paradigm shift is all the more powerful because it comes along at a time when economic and social conditions are themselves going through a major changes, changes that are coming so rapidly that is questionable that society can react quickly enough to prevent major dislocation and disruption.

The paradigm shift in early childhood development that is being discussed here is the increasing emphasis on the impact of early childhood experience on future human development. As one leading researcher pointed out, only a decade ago, students of human development were routinely taught that individual differences in infant functioning in the first year of life was not predictive of later development (Belsky and Nezworski, 1988). However, in spite of this general belief, there was a growing body of literature and research that seemed to point in another direction and as the evidence has cumulated, a new framework

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has evolved. This framework brings with it both hope and controversy. It is no coincidence that this new research and the rise of issues such as day care and family policy to presidential campaign issue level in our national arena have happened at the same time. There has been an explosion of of early childhood research studies, early intervention programs, and popular articles and books on child development and health issues. There are always some dangers in giving too much value to scientific research in determining social policy. For anyone interested in prevention and intervention, there is a need not only to address the issues raised by the new infancy research, but to become aware of the strengths and weaknesses of the new paradigm. This article cannot begin to provide a course in the changes in this field, but it can hope to encourage reading and learning and serve as a brief sampling of some of the most exciting aspects of this debate.

THE CONTEXT OF THE DEBATE

Research rarely develops important trends without some external context to drive it. It takes some outside source of energy to keep human researchers interested and continually attracted to a subject. They must often see some reward at the end of their research, whether it is financial rewards (e.g., someone is interested enough in their research to provide them with funding), public attention, or the realization that what they learn may have some use to the

society in which they live. In the case of early childhood development, the research has been clearly driven by the visible and tremendous changes in the American family, changes which would not help but effect the entire nation for years to come. In an important policy paper published in 1986, the National Center for Clinical Infant Programs stated the issue bluntly:

> A great many of our nation's families are experiencing stress, balancing the demands of of work and family, and trying to raise their infants and toddlers without the variety of community supports available to earlier generations. Furthermore, many infants and toddlers in America are subject to multiple risks which seriously threaten their healthy development. The dangers of low birth weight, the risks to babies born to adolescent parents, and the potential damage of persistent poverty have begun to capture public attention. Risks posed by emotional stress, neglect, or inadequate child care are equally serious. Yet their consequences, often obvious to those who look, are not documented until children's learning or behavior problems are noticed in preschool or school. The failures of an individual child, multiplied by thousands, become a human tragedy, a budgetary drain and a social waste. The results affect every aspect of our country's economic, political and moral health and energy. (Infants Can't Wait, 1986).

Strong statements like these challenge the researchers of early childhood development. And they are supported by the numbers that readers of Prevention Forum should already be fully aware of. Our newspapers and journals are filled with a relentless flood of numbers: the growing number of children under age 6 with mothers in the work force (53% in 1987); 3 of every 5 children have employed mothers; the lack of day care facilities (in Illinois alone it is estimated that while 1.3 million children under 13 live in working-parent families that only 146,000 licensed child care slots currently exist);

(Edmunds, 1988) all of the numbers combining to draw a picture of a nation in flux, a nation changing at such a rapid pace that it is simply overwhelming the service system designed to meet the nation's needs. It is because of this drastic and rapid change that the efforts of researchers and theorists seems to be driven with a unique sense of urgency and that their findings are often jumped upon by the popular media and the public. In a small effort to give you a sense of this new urgency and the nature of the changes in the study of early childhood, I will discuss briefly the changes in one of the most exciting areas of the debate, the theory of attachment, and discuss some of the implications of this theory that others have identified as important to the prevention field.

RECENT ATTACHMENT RESEARCH

An attachment is a relationship. The term was introduced by John Bowlby in 1958 and more fully developed in his most important work, Attachment, which was published in three volumes over a decade (Bowlby, 1958, 1969, 1973, 1980). In a brief summary, Bowlby described this relationship:

> Attachment behavior is any form of behavior that results in a person attaining or maintaining proximity to some other clearly identified individual who is conceived as better able to cope with the world. It is most obvious whenever the person is frightened, fatigued, or sick, and is assuaged by comforting and caregiving. At other times the behavior is less in evidence. Nevertheless, the knowledge that an attachment figure is available and responsive provides a strong and pervasive feeling of security, and so encourages the person to value and continue the relationship. Whilst attachment behavior is most obvious in early childhood, it can be observed

> throughout the life cycle, especially in emergencies. Since it is seen in virtually all human beings (though in varying patterns), it is regarded as an integral part of human nature and one we share (to a varying extent) with members of other species. The biological function attributed to it is that of protection. (Bowlby, 1984)

As Bowlby pointed out, the attachment behavior was most obvious in children and his work laid the foundation for an entire field of research. Though the focus in the field has shifted somewhat from normative developmental processes to the development and meaning of individual differences in attachment, the work done by Bowlby has defined the debate boundaries. (Lamb, et.al., 1985). Bowlby also identified five instinctual behavior systems important for the developing attachment: following, crying, sucking, clinging, and smiling.

For researchers that followed, Bowlby raised important questions, such as if attachment behavior was a basic human function, could it be measured and be used as a predicitive tool? How important is attachment as an impactor on future development? Was attachment between mother and child the beginning relationship on which all other relationships depend?

The work by Margaret Ainsworth and others seemed to build on Bowlby's work and would add to the framework. Ainsworth and Bell (1973) would define attachment as an affectional tie one person forms between himself and another specific one, a tie that binds them together in time and space and endures over time. She designed a procedure to assess attachment behavior, the "Strange Situation" which

would be the primary measuring tool (often with modifications)for many researchers in the following years. The procedure is described:

> The Strange Situation procedure involves seven, 3-minute episodes arranged to create increasing amounts of stress for the baby so that researchers can observe how infants organize their behavior around attachment figures when distressed. The procedure is usually conducted in a carpeted laboratory playroom, in which toys are provided for the baby and chairs are available for parent and stranger. The procedure is considered appropriate for use with infants between the ages of 12 and 24 months.

In episode 1, parent and bab are initially alone together. In episode 2, they are joined by a female stranger who later engages the infant's attention so that the parent can leave the room (episode 3). When the parent returns, the stranger leaves (episode 4) and she is followed 3 minutes later by the parent who leaves the child alone for 3 minutes or less of the infant becomes markedly upset (episode 5). The infant is then joined by the stranger (episode 6) and then by the parent, whose entrance signals the departure of the stranger (episode 7). Both adults are instructed to respond to the infant's bids but to avoid initiating interaction except when the baby is distressed.

From the child's reaction the infant is classified into one of 3 groups (A, B, C) which was later slightly refined to include 8 subgroups. The B group infants are considered "securely attached", when they greeted the parent upon with reunion either by seeking contact or proximity or by other interaction such as smiling, vocalizing or waving. The A and C groups are considered "insecurely attached." The A Group

infants are called Avoidant becuase of their tendency to avoid or ignore their parents even upon reunion. The C group infants are called Resistant because of their tendency to mingle their seeking of contact or proximity with angry, rejecting behavior (Ainsworth, Blehar, Waters, and Wall, 1978; Lamb, et.al., 1985).

This procedure is described here because of its importance in the future literature. There is little reason to attempt to review all of the research here, others have done that more completely and clearly elsewhere (Belsky, 1988; Bowlby, 1984; Bretherton, 1987; Lamb, et.al., 1985; Fitgerald, 1987; Phillips, 1987; Thompson, 1988; Watkins, 1987; Albee, 1982). It is important to realize that much of the research related to attachment theory is based on the Strange Situation or versions of it, and that the procedure has received its share of criticism. The Strange Situation procedure raised questions of its own, particularly concerning the role of the parent in the attachment process. After all, why should parents respond to the infant's signals and needs? (Lamb, et.al. 1985). There was a growing realization that attachment was a learning process which receives contributions from both the parent and the child (Brazelton, 1974, 1981). As this new complexity was added to the formula, there was a growing evidence that the mother-child interaction was important not only to the infant but to the mother. As parents repsonded to the needs expressed by their infants they were learning about the infants

expectation and desires and their individual personalities. The work on the attachment theory also aided in the redefinition of infants from an empty vessel waiting to be filled into an organism coming into the world with complex strengths of their own. And as Jerome Kagan points out, the attachment theorists also helped defend one of the last transcendental themes of our society:

> The sacredness of the parent-infant bond may be one of the last unsullied beliefs. The barrage of books and magazine articles on attachment and the necessity of skin-to-skin binding between mother and infant in the first postnatal hours is generated by strong emotion, suggesting that something more than scientific fact is monitoring the discussion. If the infant can be cared for by any concerned adult, and the biological mother is expendable...then one more moral imperative will be destroyed. (Kagan, 1984)

This may seem to be a strong generalization, but it rings true when one views the controversy raised by developmental theorists who have attempted to apply the attachment theory to the problem of nonmaternal versus maternal care, a spirited debate fueled by the findings and writings of Jay Belsky.

THE DAY CARE CONTROVERSY

It is difficult to describe the influence that Belsky has had on the current debate on attachment and day care. Since his article which appeared in Zero to Three in 1986, the mere mention of his name at a professional conference is almost certain to set an audience to murmuring, chuckling or growling. Even if his work is not being read by many of the

members of the audience, it is clear that he has been read about. His work, and the reaction to it, has serious potential consequences for the the prevention field.

Belsky, a professor at the Pennsylvania University, has concentrated much of his energy on the study of the emotional development of children. This naturally led him into the increasingly vast research around the attachment theory and then to the question of day care's role in emotional development. As he wrote in 1986:

> This specific interest in the developmental consequences of day care, and particularly a concern for negative effects, derived from policymakers' and scientists' feeling of obligation to protect the public from harm. If day care proved to be detrimental to child development, they would not want to be in the position of advocating policies to promote, or even support, the group-rearing of young children beyond the confines of the family. If such rearing experience was found to disrupt the normative course of early childhood, the best interests of the public would be served if mothers or fathers did not work unless it was absolutely essential. (Belsky, 1986).

Belsky had been involved in infant development research since the 1970s and his earlier reviews of the literature (Belsky and Steinberg, 1978 and Belsky, Steinberg & Walker, 1982) had found little evidence of detrimental effects of nonmaternal child care on infant development. As he pointed out in his 1986 article and a follow-up article the next year, evidence was crossing his desk that was directly at odd with those conclusions. The conclusion he came to was that "children who initiated care in the first year...seemed at risk for not only insecurity but for heightened aggression, noncompliance, and possibly social withdrawal in the preschool and early

school years." (Belsky, 1986, 1987). In his new stance, day care, particularly full-time day care (more than twenty hours per week), became a risk factor.

This is the stuff of controversy and other professionals quickly recognized the potential of this announcement. Despite his own protestations that this was imperfect research, ("in the ecology of day care, perfect field research seems almost impossible; moreover, it would seem that the more perfect it is, the less generalizable it might be"), he has faced close scrutiny and criticism from others in the profession. Some of the criticism has revolved around the dependence on the Strange Situation procedure, some around the broad generalization made from what the critics claim are an insufficient number of studies, and some around the policy implications of the generalization. What are the nature of these criticisms?

The Strange Situation has almost from its inception been a source of criticism. Writing in 1981, Rutter cautioned against drawing conclusions from "...curious procedures involving mother, caretakers and strangers not only going in and out of rooms every minute for reasons quite obscure for the child but also not initiating interactions in the way they might usually do." (Rutter, 1981) Chess points out also that labelling a child "avoidant" and insecure because an infant ignores the mother when she returns may be a false reading: "...is it not possible that in a child who is confident that his or her mother will return after a brief

absence, the mother's return does not call for any special recognition of this event?" (Chess, 1987). Clarke-Stewart, in more recent response, also points out a problem with the dependence on the Strange Situation:

> When I describe to people who are not developmental psychologists the 20-minute procedure (see above) on which the charge of day care infants' emotional insecurity is based, they are vastly relieved that this is all the researchers are worried about. Before we publicize a conclusion that infants of working mothers are emotionally insecure, it is important to validate the pattern observed in the Strange Situation, using other - ecologically valid - assessment procedures. (Clarke-Stewart, 1988).

Once again, this controversy shows the importance of the work done by Bowlby and Ainsworth. More than a decade after the introduction of the procedure, it remains an important, though not infallible, research tool. It will be interesting to see if solid alternatives for assessment are offered in the future. In the meantime, it is always easy to challenge the methodology in a field that is clearly recognized as impossible to study perfectly.

The other research criteria that often comes up in the debate is the small numbers of studies and the small sample sizes (Clarke-Stewart, 1988; Phillips, et.al., 1987) This is a common problem in all psychological and developmental research, but it may be particularly important in this issue. Belsky himself has admitted some of the selectivity of the evidence that was mixed in with the results that had him claiming earlier that the evidence of negative factors was virtually impossible to find. Making generalizations about an issue with the public policy implications that day care

has can be dangerous, given the media's habit of snatching up such generalizations and giving them wide publicity (Wallis, 1987). While Belsky's evidence may indeed point to a nasty trend and if it does it should be brought to the attention of other professionals, the generalization of information carries risks of its own.

Other criticism is more logically based and asks questions the current evidence does not answer. It is important to note that Belsky (1988) presented two very important set of statistics regarding day care in his article. One set noted the diversity of care arrangements that exist. As of June 1985, the latest figures available only for children under three years of age, that 45% of the infants being cared for by nonmaternal caregivers were cared for by a relative (27% in own home, 18% in relative's), 24% in family day care and 10% in centers or other group facilities. This set was important because the relatively small percentage of infants in centers and group facilities suggested that a smaller percentage of children may be at risk under the conditions outlined in the research. The second important set of data indicated that 41.5% of the infants who experienced 20 hours or more per week of nonmaternal care were anxiously attached. While this latter set of data seems to weigh heavily on his side of the argument, others have noted (Richters & Zahn-Waxler, 1988) that what is rarely mentioned is the fact that 25.7% of the infants without high levels of early nonmaternal care also

emerged from this period with insecure attachment relationships. (One is tempted to take a flippant approach here: Could it be that being born is a risk factor?). This variance in the figures leads Richters & Zahn-Waxler to wonder "...if Belsky is correct in assuming that mainstream infant day care arrangements in this country are characteristically of poor quality, the existing data would provide a much stronger basis for marveling at the resilience of children in the face of adversity than for implicating early day care as a risk factor."

Another point related to the evidence is that most of it remains very narrowly focused. Like most research, this information will probably soon lead to the conclusion that the truth lies somewhere in between the two camps, that the ecology of the child and family is far more complex and that factors far beyond the day care center play as much or more role in the development of children than currently studied. This is already happening. Belsky does indeed note a significant difference between sons and daughters in the attachment scheme, noting that mothers of sons are more likely than mothers of daughters to stay home, even if they intended to work. Belsky suggests this is because of noted increased vulnerability in sons. But as Clarke-Stewart reminds us, there are other plausible explanations from other parts of society for mother of sons to stay home more often (explanations like the seductive nature of mother-son relationships, the greater investment of parents in sons, or

the greater value that society places on boys).

There is also the role of the working mother in the equation to be more directly considered. Working mothers are less available, and not just because they are away all day, but because they have to do more distracting chores and tasks that compete with the infants when they are there. In short, the reason that their infants might be insecure "is not that day care is hard on infants, but that work is hard on mothers" (Clarke-Stewart, 1988). There is a great need to take the attachment theory to a broader arena, to place it in context with other factors in the child's life and recognize that while the infancy experience does exert an active influence on the child's development, it is not the end, but the beginning. As Sroufe points out, "later experience does not wash over the child, but rather occurs in the context of preceding development" (Sroufe, 1988).

The point of the Belsky research that most seems to be the most controversial is, of course, the policy implications of the argument. Both sides of the day care issue have seized on the early findings with some fervor. As Belsky himself notes:

> Some people can - and undoubtedly will - read my pronouncements to mean that mothers should not go to work during their infants' first year. Others can - and conceivably should - be led to conclude in view of the poor state of day care in this nation that the current evidence that more effort be made to provide parents with affordable, quality day care and with greater freedom and choice regarding their child care decisions.

This reaction stems from several a number of potential roots.

If the theory is right, it threatens the livelihood of many people, particularly in the day care field. It also holds within it, as Belsky recognizes, an anti-feminist taint, threatening women in a volatile economy which more and more demands their participation with a continued inferior role. And it threatens families and the societal myths pointed out by Kagan earlier in this article.

On the other side of the coin, Belsky may be providing us with a serious warning. In a society in flux, there are changes that are accepted as reality that must be watched carefully to minimize negative impacts. There is a chance that Belsky is quite wrong, but the chance that he may be right should make people wary. That is why this debate must be monitored and understood by prevention professionals. This brief review cannot do the complexity of this debate justice and I can only recommend that you take whatever chance you can to study this issue further.

SUMMARY

The debate over attachment theory is not the only one worthy of deeper understanding. Other important areas of concern for prevention experts should include the study of plasticity (Lerner, 1987; MacDonald, 1987; Ramey, Yeates & Short, 1984; Sigman, 1982), resilience (Sameroff, 1988; Wilson, 1987), temperament (Cameron, 1986; Field, 1987), and cognitive development (Oates & Sheldon, 1987). All of these areas of research combine with others to paint a new picture

of child development. The debates and research are only beginning and it is important not only that these developments be monitored but that other disciplines consider ways to contribute and to utilize the new knowledge.

Robert and Peterson (1984) offered five reasons for concentrating on childhood prevention and these reasons remind us of the importance of keeping track of childhood development theory:

1. Prevention of disorder is most effective of the prevention procedures are applied before any onset of the problem.
2. Childhood must be recognized as a distinct stage of life requiring special approaches for the problems particular to the child at different levels of development.
3. The downward extension of adult-oriented techniques have never sufficed in other areas of mental health interventions - there is no reason to suspect they will work in the prevention of childhood problems.
4. Work with children requires a developmental perspective which recognizes the process of continuous change over time in the psychology of the child's life.
5. The developmental perspective also recognizes the end product of the child development process.

This brings home the importance of the child development debate and has helped earn it a place in our national policy debate. We must all work to keep children's issues at the forefront of this national debate. That includes continuing to see early childhood research focus on basic issues and to see that the knowledge that comes from that research be used and not abused.

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